

WHAT IS CLAIMED IS:

1. A magnetic storage element comprising:
  - a storage layer for storing a magnetization state as
  - 5 information;
  - a magnetic field applying means for applying a magnetic field to said storage layer; and
  - a magnetic field shield, being disposed between said magnetic field applying means and said storage layer and
  - 10 comprising a soft magnetic material, for shielding at least a part of the magnetic field applied by said magnetic field applying means.
2. A recording method using a magnetic storage element,
  - 15 said magnetic storage element comprising:
  - a storage layer for storing a magnetization state as information;
  - a magnetic field applying means for applying a magnetic field to said storage layer; and
  - 20 a magnetic field shield, being disposed between said magnetic field applying means and said storage layer and comprising a soft magnetic material, for shielding at least a part of the magnetic field applied by said magnetic field applying means, wherein:
  - 25 recording of the magnetization state to said storage layer is carried out by applying the magnetic field by said magnetic field applying means to said storage layer while heating said magnetic field shield to thereby allow it to reduce or lose at least a part of the magnetization
  - 30 of said magnetic field shield.

3. A magnetic storage device comprising:

a magnetic storage element comprising a storage layer for storing a magnetization state as information, a magnetic field applying means for applying a magnetic field to said storage layer, and a magnetic field shield, being disposed between said magnetic field applying means and said storage layer and comprising a soft magnetic material, for shielding at least a part of the magnetic field applied by said magnetic field applying means;

10 a first wiring; and

a second wiring, wherein:

said magnetic storage element is disposed at an intersection of said first wiring and said second wiring,

said first wiring configures said magnetic field applying means of said magnetic storage element, from said first wiring a current-induced magnetic field being applied to said storage layer, and

said magnetic field shield is heated by said second wiring.

20

4. The magnetic storage device as claimed in Claim 3, wherein said second wiring is electrically connected to said magnetic field shield.

25 5. The magnetic storage device as claimed in Claim 3, having a magnetic storage element group configured therein, said magnetic storage element group comprising a plurality of said magnetic storage elements which are individually provided with said magnetic field shields  
30 differing in configurations thereof from each other, and being configured so as to be heated by said second wiring

provided in common.

6. The magnetic storage device as claimed in Claim 5,  
wherein said magnetic field shields differing in  
5 configurations thereof from each other differ in  
dimensions thereof.

7. The magnetic storage device as claimed in Claim 5,  
wherein said magnetic field shields differing in  
10 configurations thereof from each other differ in species  
of the soft magnetic materials used therefor.